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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,580	04/26/2007	Chris Abbot	ABBO3004/FJD	4334

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BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314-1176

EXAMINER	
VILLA, JOSE F	

ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/585,580	ABBOT, CHRIS	
	Examiner	Art Unit	
	JOSE VILLA	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 April 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/10/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1 - 10 were cancelled by applicant.

Specification

1. The disclosure is objected to because of the following informalities: where in the specification there are no guidelines or section headings that distinguish different parts of the specification.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claim 20 is** rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 20 recites, " A method for communication in a process installation with a plurality of field devices, comprising the step of: using an existing signal line SL for a first transmission technology and also for a second transmission technology. "

Claim 20 is rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385.

The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process.

For example, the method including steps of "**using an existing signal line**" is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. Thus, the method claim

1) do not tied to particular machine (such as a particular apparatus) by identifying the apparatus that accomplishes the method steps

OR

2) do not transform underlying subject matter (such as an article or material) to a different state or thing.

Thus, claim 20 is non-statutory.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 19-20** are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2003/0023795 to Packwood et al (Packwood).

As to claim 19, Packwood discloses a method for modernizing a process installation with a plurality of field devices (field devices, paragraph 9; fig, 1), which exchange data with a control room CR via a signal line SL(exchange data with controller and or central location using he bus #30 (signal line) , paragraphs 2, 5, 9, 20), comprising the step of:

older field devices which transmit data to a control room according to a first transmission technology(where the smart field devices can be old or new because uses both old and new transmission technologies, so the field devices that can work with Harts protocol (first transmission technology) transmit data to central host/workstation or hand held, paragraphs 9, 20, 22 23 27 30 47) by new field devices, which work according to a second transmission technology (where field devices can work on one or both communication technologies, the field devices can communicate each other and using the second transmission technology (Fieldbus); paragraphs 9 20 23 24 32 36), wherein: the data transmission according to the second transmission (Fieldbus, paragraph 32 33) technology occurs in a second channel on the existing signal line SL so that the data transmission signals of the different transmission technologies do not influence one another (where Fieldbus protocol occurs in a the same bus (signal line) as with Hart protocol and therefore on different channel, paragraphs 9 21 30 33 36 47).

As to claim 20, Packwood discloses a method for communication in a process installation with a plurality of field devices (fig. 1), comprising the step of: using an existing signal line SL (bus #30, fig. 1 paragraphs 9 23) for a first transmission technology (Hart protocol, paragraph 9 30 47) and also for a second transmission technology (using both technologies over same bus, where 2nd technology is Fieldbus protocol, paragraphs 9 20 32 33 47).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 11-14 and 16 are** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0023795 to *Packwood* et al (Packwood) in view U.S. Patent No. 6,640,308 to *Keyghobad* et al. ("Keyghobad")

As to claim 11, Packwood disclose a process installation having: a control room (controller/central host/ handheld, paragraph 5 9 21 22 36, figs. 1, 2); a signal line (bus # 30, fig 1); a plurality of field devices (smart field devices, #22,24,26, fig. 1, paragraph 24), which exchange data with said control room via said signal line SL (exchange data with controller/central host/handheld over the bus#30, fig.1, paragraph 5 9 21 23 36), wherein: said signal line SL is designed for a conventional first data transmission technology having a low data transmission rate (where the first transmission technology (HART) has low speed/rate, and lower transmission rate than second technology transmission (Fieldbus), paragraph 9 31, 33); at least one field device (a smart field device, paragraph 20 26), for data exchange, (exchange data with controller/central host/handheld over the bus#30, fig.1, paragraph 5 9 21 23 36) operates with a second data transmission technology (field devices using 2nd transmission technology (Foundation "Fieldbus"), paragraph 9 20 26, 32-33, 36 47) which permits a greater data transmission rate and/or an expanded functionality than the first transmission technology (where Fieldbus has a higher transmission rate than the first communication protocol (HART), paragraph 33) and which uses, as a

communication medium, the existing signal line SL (where both protocol uses the same bus #30, fig. 1, paragraphs 9 10 20 24 30 32 36-37 47).

Packwood does not explicitly disclose that a smaller than 10,000 baud)

Keyghobad discloses that a HART has a baud of 1200 with is smaller than 10000 baud (col. 1 ll.45-49)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use *Keyghobad* teaching of a Hart being smaller than a 10000 baud into Packwood. The suggestion/motivation would have been to have a low rate for the transmission of data over the signal line, (col. 1 ll.45-49- *Keyghobad;* paragraph 30 33 Packwood)

As to claim 12, Packwood disclose wherein the first and second data transmission technologies use separate data transmission channels occupying different frequency bands (where both channel use different frequencies/data rates therefore using different channel with different frequency band, paragraph 9 20 31 33)

As to claim 13, Packwood disclose the first data transmission channel occupies a frequency band up to 4 kHz (HART frequency about 1kHz-2.2kHz; paragraph 31), and the second data transmission channel occupies a frequency range greater than 4 kHz,(where Fieldbus is must grader than HART, paragraph 33) .

As to claim 14, Packwood disclose wherein: said signal line SL is a 2-wire line (where bus line can be 2-wire line, paragraph 21 24).

As to claim 16, Packwood disclose wherein said first data transmission technology

operates according to an industrial standard, e.g. Whessoematic WM550, Varec Mark/Space, Sakura V1, Tiway, Profibus, HART, FF. (first data transmission technology is HART, paragraph 20, 30-31)

8. **Claim 15 and 17 are** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0023795 to Packwood et al. (Packwood) in view U.S. Patent No. 6,640,308 to *Keyghobad* et al. ("Keyghobad" in further view of U.S. Patent Application Publication No. 2004/02400464 to Fite.

As to claim 15, Packwood and Keyghobad does not explicitly disclose wherein: said signal line SL is a copper 2-wire line with a bandwidth of about 1 MHz.

Fite discloses a signal line SL is a copper 2-wire line (twisted pair wire, paragraph 4) with a bandwidth of about 1 MHz (where the bandwidth of the twisted pair can be 1.1MHz or more, paragraph 4-5)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use the teaching of Fite of "a copper 2-wire line with a bandwidth of about 1 MHz" into Packwood. The suggestion/motivation would have been to have a high bandwidth twisted pair wire to provide high speed data rate so that the wire can provide other transmission technologies such as ADSL that are at higher speed rate (paragraph 4-5).
As to claim 17, Packwood and Keyghobad do not explicitly disclose said second data transmission technology corresponds to DSL (digital subscriber line) technology.

Fite discloses that a second data transmission technology corresponds to DSL (digital subscriber line) technology (where on a twisted pair wire DSL can also be transmitted, paragraph 4-5 7)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use the teaching of Fite of "using DSL" into Packwood. The suggestion/motivation would have been to have high speed data rate transmission technology such as ADSL/DSL over the same twisted pair wire (paragraph 4-5 7).

9. **Claim 18 is r**ejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0023795 to Packwood et al. (Packwood) in view U.S. Patent No. 6,640,308 to *Keyghobad* et al. ("Keyghobad" in further view of U.S. Patent No.6, 307,483 to Westfield et al ("Westfield")

As to claim 18, Packwood discloses that the field devices can be devices that control and monitor sensors, transmitter, current pressure valve, etc (paragraph 2-3) but does not explicitly disclose where in the process installation, is a tank farm with a plurality of tanks LC1, LC2, LC3, LC4, LC5 for containing liquid.

Westfield discloses system that is a tank farm with a plurality of tanks LC1, LC2, LC3, LC4, LC5 for containing liquid. (where the farm system than has a plurality of tanks contain liquid that is monitor by a control room, where the field tanks are the filed devices are being monitor by the controller, col. 1 ll.9-27; col. 2 ll. 15-47)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use the teaching of Westfield of "the farm system than has a plurality of tanks

contain liquid that is monitor by a control room" into Packwood. The suggestion/motivation would have been to use to system in a farm in order to monitor the liquid tanks parameters/behaviors such as pressure, temperature, etc. (col. 1 ll.9-27; col. 2 ll. 15-47).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSE VILLA whose telephone number is (571)270-5689. The examiner can normally be reached on MON-THUR, 8AM-4:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DERRICK FERRIS can be reached on (571)272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. V./
Examiner, Art Unit 2416

/Derrick W Ferris/
Supervisory Patent Examiner, Art Unit 2416